

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – V-EXAMINATION – WINTER 2015

Subject Code: 372303**Date: 08/12/2015****Subject Name: High Performance and Green Plastics****Time: 10:30 AM TO 1:00 PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Each question carry equal marks (14 marks)

- Q.1** (a) Write specific properties and applications of poly (amide-imide). **07**
(b) What do you mean by high temperature polymers? State applications of it. **07**
- Q.2** (a) Define: Polymer alloys, Polymer blends, biodegradable polymers, compatibilization, barrier properties, Miscible blend, Immiscible blend. **07**
(b) Define photoconductivity. State properties and applications of photoconductive polymers. **07**
- OR
- (b) Write short note on thermoplastic elastomers. **07**
- Q.3** (a) What are the basic requirements for polymer blend preparation? **07**
(b) With suitable example explain the procedure for selecting polymer blend components. **07**
- OR
- Q.3** (a) State various methods of blend preparation and explain any one. **07**
(b) Why ABS-PC blend is suitable for mobile body? State characteristics and applications of ABS-PC. **07**
- Q.4** (a) State and explain factors affecting biodegradable polymers. **07**
(b) Write short note on polysaccharides. **07**
- OR
- Q.4** (a) Explain biological degradation mechanism of polymers. **07**
(b) Write any four polymer blends and state applications of it. **07**
- Q.5** (a) Write properties and applications of Poly Lactic Acid (PLA). **07**
(b) State various processing methods of biodegradable polymers and explain any one. **07**
- OR
- Q.5** (a) Explain the impact of biodegradable polymers on environment. **07**
(b) State and explain various additives use for biodegradable polymers. **07**
